



Author Index of Volume 32

- Aaronson, H.I., 107
Abinandanan, T.A., 169
Akao, T., 57
Anchev, V.C., 99
Auyeung, R.C.Y., 221

Balakrishnan, V., 201
Balkanski, M., 93
Banerjee, S., 25
Bath, A., 51
Batra, S., 25
Beke, D.L., 185
Belyansky, M.P., 7
Bobruiko, V.B., 7

Carel, R., 211
Chen, M.C., 39
Choi, J.M., 89
Correra, L., 33
Cotell, C.M., 221

Desu, S.B., 75, 83
Dmowski, K., 51
Dubey, K.S., 285
D'Antonio, P., 221

Farcas, T., 1
Fayek, S.A., 47
Froes, F.H., 279

Gaskov, A.M., 7

Hall, M.G., 107
Hegde, M.S., 239
Henderson, H.T., 63
Hong, C.H., 69
Hong, K., 69
Horwitz, J.S., 221
Hussain, O.M., 93
Hwang, S.-T., 63

Johnson, W.C., 169
Julien, C., 93

Kaganovskii, Yu.S., 185
Kambe, S., 57
Kelton, K.F., 145
Kim, Y.G., 89
Konnert, J., 221
Kouznetzova, T.A., 7
Kumar, D., 239
Kumar, V., 177

Lee, K., 231
Lee, K.C., 39
Lei, C.L., 39
Lepley, B., 51
Li, W.-H., 39
Li, Y.-L., 63
Lopatina, E.V., 17
Losson, E., 51
Lupsan, A., 1
Lux, G.E., 25

Maged, A.F., 47
Mahajan, S., 231
Marsh, S.P., 159
Masumura, R.A., 107, 247
McFadden, R.S., 231
Menon, E.S.K., 107
Mikheev, N.N., 11
Mishra, S., 177
Mohanty, O.N., 267
Moon, D.W., 107

Naidu, B.S., 93
Nguyen, P., 63
Nicoletti, S., 33

Ohshima, S., 57
Okuyama, K., 57
Ou, S.Y., 39

Palibroda, E., 1
Pande, C.S., 247
Pavlidis, D., 69

Philips, B.A., 231
Pi, S.H., 89
Pinto, N.G., 63
Pollock, T.M., 255

Ramachandrarao, P., 285
Ramanujan, R.V., 125
Ranganathan, S., 137
Rath, B.B., 101, 153
Reddy, P.J., 93
Russell, K.C., 279

Sabhapathi, V.K., 93
Sanday, S.C., 153
Sarkisov, P.D., 17
Satyalakshmi, K.M., 239
Shime, I., 57
Sigaev, V.N., 17
Singh, A., 137
Spanos, G., 107
Sprague, J.A., 221
Stefanovich, S.Yu., 17
Stepovich, M.A., 11
Sturm, A., 295
Sultan, A., 25
Sundar Manoharan, S., 239
Sundararaman, D., 307

Tenchev, R.T., 100
Thompson, C.V., 211
Trifonova, E.P., 99

Uthanna, S., 93

Vardiman, R.G., 107
Vijay, D.P., 75, 83

Wang, K., 69
Wei, C.C., 39
Wiedemann, A., 295
Wollenberger, H., 295

Yu, H.Y., 153



Subject Index of Volume 32

Aluminium

effects of composition on isothermal solidification kinetics of highly undercooled alloys, 279

Aluminium alloys

solid-state transformations involving quasicrystals, 137

Aluminium oxide

a new image of porous aluminium oxide, 1

Amorphous alloys

optical absorption of glasses in the systems $(\text{As}_2\text{Se}_3)_{1-x}\text{Tl}_x$, 47

Amorphous materials

a new image of porous aluminium oxide, 1

effects of composition on isothermal solidification kinetics of highly undercooled alloys, 279

nanocrystalline state and solid state amorphization, 307

nanostructured amorphous Si-Au alloys—structure and atomic correlations, 295

random walks on fractals, 201

transient nucleation in glasses, 145

Arsenic-selenium

optical absorption of glasses in the systems $(\text{As}_2\text{Se}_3)_{1-x}\text{Tl}_x$, 47

Atomic force microscopy

microstructural development of thin films grown by pulsed laser deposition, 221

Atomic ordering

microstructural characteristics of mixed III-V epitaxial layers, 231

Auger electron spectroscopy

determination of parameters of surface mass transport from morphological changes of beaded thin films, 185

diffusion of cadmium in lead telluride, 7

Bi and Cu valence

preparation of a single phase sample of $(\text{Bi}_{1-x}\text{Cu}_x)\text{Sr}_2\text{YCu}_2\text{O}_y$ and its physical properties, 57

Bi-1:2:1:2 phase

preparation of a single phase sample of $(\text{Bi}_{1-x}\text{Cu}_x)\text{Sr}_2\text{YCu}_2\text{O}_y$ and its physical properties, 57

Boltzmann-Matano analysis

modeling of boron diffusion in polysilicon-on-silicon structures using a rapid thermal anneal step for ultra-shallow junction formation, 25

Boron

effects of heat treatments on coercivity and microstructure in $\text{Nd}_{15}\text{Fe}_{77}\text{B}_8$ sintered magnets, 89

modeling of boron diffusion in polysilicon-on-silicon structures using a rapid thermal anneal step for ultra-shallow junction formation, 25

Cadmium

diffusion of cadmium in lead telluride, 7

Coarsening

development of spatial correlations during coarsening, 169

Copper-manganese sulphide

co-precipitation of copper-manganese sulphide in Fe-3%Si steel, 177

Crystallization

stillwellite glass-ceramics with ferroelectric properties, 17
transient nucleation in glasses, 145

Deep levels

peak and side data analyses to measure deep levels by DLS-82E lock-in spectrometer, 51

Defect formation

nanocrystalline state and solid state amorphization, 307

Diffraction

on the stabilization of retained austenite: mechanism and kinetics, 267

Diffusion

asymptotic kinetics of phase coarsening in dilute systems, 159
diffusion of cadmium in lead telluride, 7

gas permeabilities in thermally grown silicon dioxide films, 63

DLTS

peak and side data analyses to measure deep levels by DLS-82E lock-in spectrometer, 51

Elastic stress effects

development of spatial correlations during coarsening, 169

Electric field effect

a new image of porous aluminium oxide, 1

Electrical conduction

a.c. conductivity studies on Al/MoO₃/Al sandwich structures, 93

Electrical measurements

on the stabilization of retained austenite: mechanism and kinetics, 267

Electron microscopy

a new image of porous aluminium oxide, 1

determination of parameters of surface mass transport from morphological changes of beaded thin films, 185

Electrons

the energy spectrum of electrons passing through film targets and some of its applications to electron beam engineering, 11

Energy

the energy spectrum of electrons passing through film targets and some of its applications to electron beam engineering, 11

Equilibrium morphology

equilibrium crystal shapes and their application to nucleation in solids, 125

Fatigue

novel fatigue-free layered structure ferroelectric thin films, 75

- Ferroelectric**
 novel fatigue-free layered structure ferroelectric thin films, 75
- Ferroelectric properties**
 stillwellite glass-ceramics with ferroelectric properties, 17
- Free energy**
 a thermodynamic approach to the viscous behaviour of glass-forming liquids, 285
- Free volume**
 a thermodynamic approach to the viscous behaviour of glass-forming liquids, 285
- Gallium arsenide**
 phase-controlled metal-organic chemical vapor deposition
 epitaxial growth of GaN on GaAs(100) using NH₃, 69
- Gallium nitride**
 phase-controlled metal-organic chemical vapor deposition
 epitaxial growth of GaN on GaAs(100) using NH₃, 69
- Gamma radiation**
 optical absorption of glasses in the systems (As₂Se₃)_{1-x}Tl_x, 47
- Glass**
 transient nucleation in glasses, 145
- Glass transition**
 a thermodynamic approach to the viscous behaviour of glass-forming liquids, 285
- Glass-ceramics**
 stillwellite glass-ceramics with ferroelectric properties, 17
- Grain boundaries**
 grain boundary and grain size effects in high and low transition temperature superconductors, 247
- kinetics of nucleation and growth processes, 101
- nanocrystalline state and solid state amorphization, 307
- nanostructured amorphous Si-Au alloys—structure and atomic correlations, 295
- Grain growth inhibitor**
 co-precipitation of copper-manganese sulphide in Fe-3%Si steel, 177
- Grain orientations**
 texture development in polycrystalline thin films, 211
- Hall effect**
 preparation of a single phase sample of (Bi_{1-x}Cu_x)Sr₂YCu₂O_y and its physical properties, 57
- High temperature strengthening**
 the growth and elevated temperature stability of high refractory nickel-base single crystals, 255
- High-temperature superconductors**
 preparation of a single phase sample of (Bi_{1-x}Cu_x)Sr₂YCu₂O_y and its physical properties, 57
- Inclusion near interfaces**
 on the heterogeneous nucleation of martensite, 153
- Indium phosphide**
 peak and side data analyses to measure deep levels by DLS-82E lock-in spectrometer, 51
- Iron**
 effects of heat treatments on coercivity and microstructure in Nd₁₅Fe₇₇B₈ sintered magnets, 89
- kinetics of nucleation and growth processes, 101
- Josephson effect**
 grain boundary and grain size effects in high and low transition temperature superconductors, 247
- Kinetic processes**
 texture development in polycrystalline thin films, 211
- Lanthanum nickelate**
 superconducting and non-superconducting oxide multilayers, 239
- Laser ablation**
 c-axis oriented ferroelectric SrBi₂(Ta_xNb_{2-x})O₉ thin films, 83
- Laser processing**
 large-area deposition of thin films by UV pulsed laser ablation, 33
- Layered structure**
 a.c. conductivity studies on Al/MoO₃/Al sandwich structures, 93
- c-axis oriented ferroelectric SrBi₂(Ta_xNb_{2-x})O₉ thin films, 83
- large-area deposition of thin films by UV pulsed laser ablation, 33
- novel fatigue-free layered structure ferroelectric thin films, 75
- Lead telluride**
 diffusion of cadmium in lead telluride, 7
- Ledges**
 sympathetic nucleation: an overview, 107
- Losses**
 the energy spectrum of electrons passing through film targets and some of its applications to electron beam engineering, 11
- Martensitic transformation**
 on the heterogeneous nucleation of martensite, 153
- Metallic oxides**
 superconducting and non-superconducting oxide multilayers, 239
- Metastable phases**
 effects of composition on isothermal solidification kinetics of highly undercooled alloys, 279
- MIS structures**
 peak and side data analyses to measure deep levels by DLS-82E lock-in spectrometer, 51
- Microstructural development**
 development of spatial correlations during coarsening, 169
- Microstructures**
 microstructural characteristics of mixed III-V epitaxial layers, 231
- Mixed III-V layers**
 microstructural characteristics of mixed III-V epitaxial layers, 231
- MOCVD**
 phase-controlled metal-organic chemical vapor deposition
 epitaxial growth of GaN on GaAs(100) using NH₃, 69
- Molybdenum trioxide**
 a.c. conductivity studies on Al/MoO₃/Al sandwich structures, 93
- Neodymium**
 effects of heat treatments on coercivity and microstructure in Nd₁₅Fe₇₇B₈ sintered magnets, 89
- Neutron scattering**
 nanostructured amorphous Si-Au alloys—structure and atomic correlations, 295
- Nickel-base alloys**
 the growth and elevated temperature stability of high refractory nickel-base single crystals, 255
- Noise processes and phenomena**
 random walks on fractals, 201
- Nucleation**
 effects of composition on isothermal solidification kinetics of highly undercooled alloys, 279

- equilibrium crystal shapes and their application to nucleation in solids, 125
- kinetics of nucleation and growth processes, 101
- microstructural development of thin films grown by pulsed laser deposition, 221
- on the heterogeneous nucleation of martensite, 153
- transient nucleation in glasses, 145
- Optical absorption**
- optical absorption of glasses in the systems $(\text{As}_2\text{Se}_3)_{1-x}\text{Tl}_x$, 47
- Optical properties**
- a.c. conductivity studies on $\text{Al}/\text{MoO}_3/\text{Al}$ sandwich structures, 93
- Orientation**
- c -axis oriented ferroelectric $\text{SrBi}_2(\text{Ta}_x\text{Nb}_{2-x})\text{O}_9$ thin films, 83
- Ostwald ripening**
- asymptotic kinetics of phase coarsening in dilute systems, 159
- Oxygen**
- gas permeabilities in thermal grown silicon dioxide films, 63
- Percolation phenomena**
- random walks on fractals, 201
- Perovskite oxides**
- superconducting and non-superconducting oxide multilayers, 239
- Phase separation**
- microstructural characteristics of mixed III-V epitaxial layers, 231
- Phase transitions**
- asymptotic kinetics of phase coarsening in dilute systems, 159
 - development of spatial correlations during coarsening, 169
- Polycrystalline films**
- texture development in polycrystalline thin films, 211
- Polysilicon-on-silicon structures**
- modeling of boron diffusion in polysilicon-on-silicon structures using a rapid thermal anneal step for ultra-shallow junction formation, 25
- Pulsed laser deposition**
- microstructural development of thin films grown by pulsed laser deposition, 221
- Quasicrystals**
- solid-state transformations involving quasicrystals, 137
- Raman scattering**
- enhanced Raman scattering from crystal violet and benzoic acid molecules adsorbed on silver nanocrystals, 39
- Rational approximants**
- solid-state transformations involving quasicrystals, 137
- Recrystallization**
- kinetics of nucleation and growth processes, 101
- Refractory elements**
- the growth and elevated temperature stability of high refractory nickel-base single crystals, 255
- RTA**
- modeling of boron diffusion in polysilicon-on-silicon structures using a rapid thermal anneal step for ultra-shallow junction formation, 25
- Secondary recrystallization**
- co-precipitation of copper-manganese sulphide in Fe-3%Si steel, 177
- Silicon oxide**
- gas permeabilities in thermally grown silicon dioxide films, 63
- Silicon steel**
- co-precipitation of copper-manganese sulphide in Fe-3% steel, 177
- Small-angle scattering**
- nanostructured amorphous Si-Au alloys—structure and atomic correlations, 295
- SNS junction**
- superconducting and non-superconducting oxide multilayers, 239
- Steel**
- on the stabilization of retained austenite: mechanism and kinetics, 267
 - sympathetic nucleation: an overview, 107
- Stillwellite phases**
- stillwellite glass-ceramics with ferroelectric properties, 17
- Straggling**
- the energy spectrum of electrons passing through film targets and some of its applications to electron beam engineering, 11
- Strontium bismuth tantalate**
- novel fatigue-free layered structure ferroelectric thin films, 75
- Strontium bismuth tantalum oxide**
- c -axis oriented ferroelectric $\text{SrBi}_2(\text{Ta}_x\text{Nb}_{2-x})\text{O}_9$ thin films, 83
- Superconductivity**
- microstructural development of thin films grown by pulsed laser deposition, 221
- Superconductivity materials**
- grain boundary and grain size effects in high and low transition temperature superconductors, 247
- Surface diffusion**
- determination of parameters of surface mass transport from morphological changes of beaded thin films, 185
- Surface energy**
- equilibrium crystal shapes and their application to nucleation in solids, 125
- Surface morphology**
- enhanced Raman scattering from crystal violet and benzoic acid molecules adsorbed on silver nanocrystals, 39
- Surface plasmons**
- enhanced Raman scattering from crystal violet and benzoic acid molecules adsorbed on silver nanocrystals, 39
- Surface roughness**
- enhanced Raman scattering from crystal violet and benzoic acid molecules adsorbed on silver nanocrystals, 39
- Surface segregation**
- equilibrium crystal shapes and their application to nucleation in solids, 125
- Sympathetic nucleation**
- sympathetic nucleation: an overview, 107
- Texture**
- texture development in polycrystalline thin films, 211
- Theory of diffusion**
- random walks on fractals, 201
- Theory of electron transport**
- grain boundary and grain size effects in high and low transition temperature superconductors, 247
- Thin films**
- determination of parameters of surface mass transport from morphological changes of beaded thin films, 185
 - gas permeabilities in thermally grown silicon dioxide films, 63
 - large-area deposition of thin films by UV pulsed laser ablation, 33

Transformations

solid-state transformations involving quasicrystals, 137
sympathetic nucleation: an overview, 107

Transmission electron microscopy

nanocrystalline state and solid state amorphization, 307

Viscosity

a thermodynamic approach to the viscous behaviour of glass-forming liquids, 285

X-ray spectroscopy

phase-controlled metal-organic chemical vapor deposition
epitaxial growth of GaN on GaAs(100) using NH₃, 69

